WO 2005/050493 PCT/EP2004/012735

- 31 **-**

5

30

10 Claims

- 1. A simulation system for computer-implemented simulation and verification of a control system under development, the simulation system comprising a generic model animation and in-model calibration interface, which uses measurement and calibration technologies with a host-target architecture, whereby the host contains at least one respective modelling tool and on the target software of the control system is executed.
- A simulation system according to claim 1, comprising a target server to connect the modelling tool with the target.
 - 3. A simulation system according to claim 2, whereby the target server contains a protocol driver of a communication protocol used for communication with the target.
 - 4. A simulation system according to claim 1, comprising a plurality of simulation processes with corresponding memory and interface modules, which modules comprise

WO 2005/050493 PCT/EP2004/012735

- 32 -

distinct memory locations for inter-module communication.

- 5. A simulation system according to claim 4, wherein simulation is performed by running a control system simulation model, the simulation model comprising a number of sub-models being performed on one of the plurality of modules, respectively.
- 10 6. A simulation system according to claim 4, wherein at least some of the modules are dynamically reconfigurable for communication via distinct memory locations.
- 7. A host of a simulation system for computer-implemented simulation and verification of a control system under development, the host comprising a generic model animation and in-model calibration interface, which uses measurement and calibration technologies for a host-target architecture, whereby the host contains at least one respective modelling tool and a target server to connect the modelling tool with the target.
- 8. A computer-implemented method for simulating and verifying a control system under development by means of a simulation system according to claim 1.
- 9. A computer program with program coding means which are suitable for carrying out a method according to claim
 7, when the computer program is run on a computer.
 - 10. A computer program product with a computer-readable medium and a computer program according to claim 7 stored on the computer-readable medium.